FINAL REPORT

STRATEGIC PARTNERS STUDY

Prepared by INPUT for Nucleus International Corporation

September 28, 1991

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STRATEGIC
PARTNERS STUDY

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NUCLEUS INTERNATIONAL CORP

AUTHOR

TITLE

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I. OBJECTIVES AND SCOPE

The original objectives and scope for this study are outlined in detail in the final project proposal which is contained in *Appendix D*. In summary they are as follows:

A. Objectives

- To work jointly with Nucleus to identify the highest potential channels to effect the profitable technology transfer.
- Explore, on an unbiased basis and *confidential* basis, the interest in a partnership with a limited set of specific potential partners operating in each channel.
- Provide unbiased recommendations on which channels and classes of partners are likely to have the highest probability of meeting Nucleus' business objectives.

B. Scope

- Limited to U.S. and Canadian companies.
- IBM to be excluded.
- Limited to three to four interviews per channel. The total number of completed interviews guarantee under this contract was limited to four.

C. Evolution of Scope

As the study actually progressed, candidates from all channels (relational database/software product companies, chip manufacturers, PC/workstation manufacturers, and systems providers) were pursued simultaneously utilizing a directed list of target candidates agreed to by INPUT and Nucleus.

II. STUDY DEMOGRAPHICS

The following summarizes the overall study demographics

- A total of 23 companies were contacted.
- Of the 23, meaningful discussions occurred with 20.
- Packages and letters were sent to 18 targeted contacts.
- The total number of attempted calls was approximately 200.
- The total number of completed calls was approximately 80.
- The typical number of contacts required to bring closure was 3.

Formal interviews were completed on four of the firms contacted; Sybase, Compaq, GO Corporation and Oracle. Although DEC and HP declined the formal interviews, both have expressed an active interest in pursuing further discussions. These discussions are already underway. Two firms are still reviewing material which should lead to formal interviews.

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Appendix C contains an edited list of contacts made with each firm. This list was utilized throughout the project to track calls and contacts. All contact names are present. Redundant information involving multiple calls to particular individuals has been eliminated.

III. STATUS AT PROJECT WRAP-UP

- As of the time of completion of this report, preliminary meetings have been held between Nucleus and HP as well as DEC.

- The potential to complete two to three other interviews with Tandem, Claris and Intel still exists.

- Four interview profiles have been delivered to Nucleus.

- Ten companies have literature in hand, but are not likely to have interest based on INPUT's interactions with them to date.

A complete status along with recommended next steps is contained in *Appendix A*. Recommended next steps are outlined in more detail in the RECOMMENDATIONS section of this report.

IV. CONCLUSIONS

A. General

Based on interaction with potential target companies INPUT believes that there is a high probability that Nucleus will be able to find a suitable partner or partners over time. Nucleus should be encouraged that at least two of the targets identified for the study have opened discussions on an informal basis. INPUT's past experience with "partnering" projects would suggest that identification of two candidates who are willing to talk in a sample of approximately twenty-five is a high hit rate. Some specific issues which need to be addressed are:

- Nucleus' specific objectives in terms of the nature of the partnership desired need to be better articulated. The most frequent questions asked by prospective companies had to do with "exactly" what kind of relationship was being sought; financial investment, marketing agreement, joint product development, etc.

  INPUT also concludes that these objectives should be thought out in terms of the type of company being approached. Hardware manufactures including components manufacturers are likely to be receptive to entirely different types of relationships than software companies, etc.

- Collateral to be used for the purpose of seeking out partners still seems to need additional refinement. Combining information about the underlying technology with information about the specific existing implementation caused confusion with several of the targeted firms. Marketing and business development people tend to be interested in products; technologists in the long term potential of the underlying architecture.

  Further work in refining the collateral would also support the development of approaches to soliciting partners on a more targeted basis. (See bullet 1 above.)

- In general the economic climate in the industry is not healthy at the moment. As a result companies are tending to stick to their knitting. This is likely a temporary inhibitor, but was clearly reflected in the feedback obtained in the interview process.

B. Specific Categories of Companies

- Software Products Firms - In general the software products companies showed lukewarm interest in the Nucleus technology or discussing a relationship. INPUT believes that there are probably a number of reasons for this. In the case of the relational database firms (Oracle, Sybase, ASK/Ingress) there is clearly a "pride of authorship" issue. Couple this with the sad state of financial affairs at Ingress and the general organizational chaos at Oracle, and receptivity to fresh ideas from the outside appears to be at a minimum. Although Microsoft, did not give a formal interview, they indicated that they had looked at these types of technologies before, and were not interested at this point in time.

- Systems Companies (Hardware Manufacturers) - Clearly the study achieved the best results in this category. There are probably a number of reasons. First almost every firm represented is looking for new ways to push margins up. On the one hand, they are carrying the banner of "open systems", on the other they clearly are facing declining margins on their core businesses. Something like the Nucleus technology offers an opportunity to add product differentiation.

  Secondly, while times are tough, there is still money put aside on a regular basis for R&D and potential acquisitions or investments. INPUT believes that this class of companies should be pursued further. (Additional discussion occurs in the Recommendations Section.)

- Chip Manufacturers - Although no interviews have been completed to date in this category, INPUT believes this area should still be pursued. The chip manufacturers seem to be going in two directions at once; RISC simplified, and a variety of specialized architectures such as massively parallel. Clearly one of the best candidates is INTEL, where the study has recently made some progress.

- PC/Workstation Manufacturers - INPUT believes this is probably the least fertile field for finding a partner. The current competitive crunch has strongly limited R&D budgets. Furthermore, with limited exception, both PC and workstation companies are packagers of existing technology, and with the exception of firms like HP and Sun, seldom provide any unique application function.

V. RECOMMENDATIONS

A. General

- As suggested in earlier, Nucleus should focus future contacts on the systems manufacturers and chip companies. In addition to INTEL, MIPS and Motorola should be pursued. Unfortunately, INPUT was unable to make any direct meaningful contacts with Motorola during the course of the study.

- Specific objectives should be developed for the various types of partnerships which could be proposed; marketing, joint product development, investment, etc. These should be tuned to the interests of the various categories of partners being approached; chip manufacturers, systems manufacturers, software companies, etc. Collateral should be adjusted accordingly.

- The objective of future contacts should be to get a face to face meeting focused on discussion of the technology's potential in the context of a specific partnership objective. In this study INPUT attempted to collect too much information (not the fault of Nucleus) on individual companies before establishing interest levels.

B. Specific Firms

Appendix A gives INPUT's recommendations for specific courses of action on all the companies with which some contact was made during the course of the study. It suggests that INPUT continue to follow-up with MIPS, Lotus and Claris. The objective of this follow-up would be to attempt to stimulate enough interest on the part of these firms to set up a meeting with Nucleus.

The report also indicates that Nucleus should pursue Tandem and Intel directly. INPUT can assist by providing project documentation on existing contacts with these firms.

VI. CLOSING OBSERVATIONS

INPUT regrets that the timetable for this project extended well beyond initially anticipated dates. A combination of the time of year, coupled with what turned out to be a more complex than usual candidate identification process all contributed to the delay.

Appendix A: **FINAL STATUS REPORT**

NUCLEUS STUDY - STATUS REPORT

September 28, 1991

COMPANY	KEY CONTACT	#	STATUS	NEXT STEPS
Apple/Claris	Dan Eilers President Jim Davis VP - Business Dev.	4	Randy Livingston, Mgr. Corp. Development indicated no interest. Suggested Dan Eilers at Claris. Materials faxed to Dan's office 6/19. Recontacted on 7/22. Davis has materials, contacted 9/3 - **Still Active**	INPUT follow-up with Davis
ASK/Ingress	Dave Kellog Data Server Products	5	Materials sent to Dave Kellog,, Product Manager, Data Server Products. Last contact 9/19. **No Interest at This Time**	None
AST	Genelle Trader Dir., Portable Systems	3	Contacted 9/17. **No Interest**	None
Compaq	Richard Swingle	2	Original contact, Mike Swavely, VP Marketing and sales is on sabatical. Office recommended Swingle. Materials faxed and telephone messages exchanged. Anticipate getting interview next week. **Completed Interview** 6/24.	None
Digital Equipment	Nick Houpas Director, Consultant Relations Dave Zwicker, Dir. DB Product Development Henry Crouse VP External Relations Paul McEnroe, Dir. Strategic Technical	6	Left message with Zwicker on 7/24. Initiated other contacts through Henry Crouse. Identified proper person, Paul McEnroe, Director of Technical Strategic Relations. Delivered materials on 7/24. Paul agreed to interview. Meeting established between Nucleus and DEC with McEnroe for late September.	Nucleus follow-up
Hewlitt Packard	Rebecca Lee Market Research David Wertheim, Product Manager	12	Materials faxed to Rebecca and Jan McDaniels, Mgr. of Consultant Relations. Playing telephone tag with Wertheim. Did talk to secretary on 7/24. Agreed to interview. Meeting established between Nucleus and Wertheim for late September.	Nucleus follow-up
GO Corporation	Bill Campbell, CEO Satya Yenigalla, Data Base Architect	2	Talked to secretary, sent materials with special cover note referencing Tom's interest in having Bill's opinion. Received call back and **Completed Interview** on 6/25.	None
IBM	Kathy Grosholz	3	Based on conversation with Tom Bechler, agreed not to proceed further at this point in time.	Materials forwarded to Tom Bechler.

- Number of persons contacted to date.

INPUT

COMPANY	KEY CONTACT	#	STATUS	NEXT STEPS
Informix	Gilbert Wai Exec. Dir., Product Mkt.	2	Talked with both Gilbert and the president at Informix. Are aware of the product, and have no interest at this time.	None
Intel	Avram Miller Dir., Business Dev. Robert Steinjan	7	Made several contacts. Best appears to be Avram who has reviewed the material and shipped it to Steinjan. Contacted Steinjan's secreaty on 7/22. Will pursue interview. Held conversation with Avram on September 5, 1991. He agreed to pursue within Intel. Sent four copies of collateral. Said he would circulate.	Nucleus follow-up directly with Avram Miller
Lotus	David Weinberg, Product Manager Bruce Johnston, Dir. of Corporate Development.	5	Still playing telephone tag with Weinberg. Recontaced Bruce Johnston. Both Weinberg and Johnston are out of town but are returning calls as this point. Will try to nail down for interview this week. Sent materials to both to short cut time delays.. Got through to Weinberg 9/11. He indicated he would do the interview. Interview mailed.	INPUT follow-up with Weinberg
MIPS	Joe DeNucci VP, Strategy Develop. Jim Davis VP - Business Dev.	5	MIPS has the materials. DeNucci has called back twice, but we've missed each other. DeNucci referred to Jim Davis. Davis asked for materials. Sent on 8/15. Recontacted on 9/3. Jim asked for two weeks.	INPUT follow-up with Davis
Microsoft	Gary Voth, Product Mgr., SQL Server	4	Told to contact Voth by David Thatcher. **No Interest at This Time.**	None
Motorola			Still no progress.	None
Oracle	Ed Adams VP Mike Hartstein, Mgr. RDBMS Products	5	Adams agreed to see to it that we got the right interviews. He has materials and questionnaire. Said to call back on Tuesday. Directed to Mike Hartstein. **Interview Completed**, 6/28.	None
PacBell	Maurice Welsh VP, Marketing	4	Received call back indicating that there was **No Interest at This Time.**	None
Stratus	Brian Cairns, President Kathy St. Hiliare, (SEC) VP Product Development Anne Jenkins, Mgr. Systems & Dev. Software	5	Still working on contacting Anne. Anne reviewed materials in late August. Contacted in early September. **No Interest at This Time.**	None
Sybase	Donna Jeker, Director Strategic Partners	3	**Completed Interview** on 7/23.	None

COMPANY	KEY CONTACT	#	STATUS	NEXT STEPS
Tandem	Gerry Held VP-New Ventures Sukanagi Bruce Bastl, VP Marketing Steve Schmidt SVP	6	Held will handle business end of the interview. Sukanagi referred to me by Larry Laurich's office. Several telephone tags with Sukanagi. Re-entered through Bruce Bastl on 8/15 who said he would call Laurich's boss, Steve Schmidt. Schmidt sent materials on 9/6. Currently awaiting return call from Schmidt.	Nucleus follow-up directly with Steve Schmidt.
Xerox	Cynthia Mittelsteadt Dudley Braun	6	Materials sent, agreed to review. Cynthia will coordinate the review, and interview. Cynthia called back and indicated that I should talk with Bob Baden. Baden did not think that Xerox would be interested at this point in time.	None

- Number of persons contacted to date.

Appendix B: INTERVIEW SUMMARIES

INTERVIEW SUMMARY - SYBASE
STRATEGIC PARTNERS STUDY
Nucleus Corporation

CONTACTS - Primary

Mark B. Hoffman
CEO
SYBASE
6475 Christie Avenue
Emeryville, CA 94608

PHONE: 415-596-3500
FAX: 415-658-9441

CONTACTS - Interview

Donna Jeker
Director, Strategic Partners
(Same Address)

PHONE: 415-596-3500

SUMMARY

This interview was conducted with Donna, who had the technical material reviewed by their technical staff. Sybase is not interested in pursuing a relationship at this time. Donna indicated that she thought that the technology probably had a niche application in the relational market, and possibly other markets; but felt that it was too specialized to be considered by them at this time. It is INPUT's opinion after examining the entire interview, that Sybase has already made whatever technical commitments it is going to make for the next generation of their engine and is focusing its investments at the moment in covering as many platforms as possible. I don't think that Donna it a heavy in the technical area, but appeared to have done some homework with their technical people prior to the interview.

DEMOGRAPHICS

- *STATISTICS* - Sybase had approximately $100M in revenue in 1990 on an annualized bases and anticipates annual growth in the 50% range over the next two years. Sybase has positioned itself as a technology leader in the database software market and a leader in high volume transaction processing. Industry pundits, evaluate their offering as the premier in its class. Growth has been fueled in recent years by over $28M in equity investment from companies such as Apple, Ashton-Tate, Lotus and Microsoft.

- *FUTURE GROWTH* - While revenue growth rates are very high, profitability still remains a problem. INPUT has no doubts however, that Sybase will become the major player in its market. The company will continue to position itself as a technology leader. Current thrust include moving it products to multiple platforms, and providing new products for the non-stop hardware environments, such as Stratus'. Sybase products already reside a a wide variety of platforms; NCR, AT&T and Pyramid's just to name a few.

Numerous software alliances fill out the applications suite for the Sybase product line, and Sybases's recent entry into the CASE market (providing tools for the development of distributed systems on the Sybase platform) will undoubtedly be a key strategy for growth over the next several years.

- *TARGET MARKETS/CHANNELS* - Despite growing direct marketing efforts, INPUT believes that a significant share of Sybase's product is taken to the market through OEM's allied hardware companies, etc. This trend is like to continue over the next several years.

  Although Sybase products serve all industry sectors, the principal industries served are: government and defense, banking and finance, telecommunications and manufacturing.

- *DEVELOPMENT STRATEGY* - 95% of product content is developed in-house.

OUTSIDE RELATIONSHIPS

- *STRATEGIC PARTNERSHIPS/ALLICANCES* - A number have already been mentioned. To recapitulate:

  - *Hardware Vendors:* DEC, HP, AT&T, NCR, Pyramid, Stratus, NeXT

  - *Software Vendors:* Ashton-Tate (Borland), Microsoft, TRW, (Many Others)

- *PARTNERSHIP/ALLIANCE CONTACTS* - Handled primarily by Donna Jeker. There is no formal process for identifying strategic partnership or alliance opportunities. Incoming opportunities are shuttled to Donna, who in turn routes them through the corporation.

NUCLEUS TECHNOLOGY

- *SIGNIFICANCE/APPLICATION* - Donna indicated that the material on the Nucleus technology had been reviewed by their product architecture group. (She did not give me the name of the individual who actually did the review.) Sybase's reaction to the underlying technology was that it should probably be of interest to the chip and equipment manufacturers. In terms of applications, they felt that specialty products might utilize such technologies, and that they had looked at similar technologies in the past; but didn't feel that it would have much application in a large-scale (her words) environment.

  As was the case with one other respondent, Sybase indicated that there might well be applicability in specialized database situations.

NUCLEUS SERVER

- *RATING OF RDBMS CHARACTERISTICS* - (1 = Low Importance, 5 = Highest Importance)

Donna indicated that she and the technical group had some differences regarding the importance of various database characteristics. Booth views are presented below:

· Strategic Partner's View (Donna)

- 2 Automatic full indexing of all elements*
- 5 Ease of data base administration
- 3 Reduced disk storage
- 3 Reduced memory requirements
- 3 Object orientation
- 5 Concurrency control
- 3 Processing performance

* - For a limited set of unstructured applications

· Technical Organization's View

- 3 Automatic full indexing of all elements
- 4 Ease of data base administration
- 5 Database integrity, recovery characteristics
- 4 Reduced disk storage
- 3 Reduced memory requirements
- 4 Object orientation
- 5 Concurrency control
- 4 Processing performance

· *OTHER COMMENTS* - Donna indicated that the types of applications environments they were targeting called for high volume processing of largely structured applications. She felt that in that kind of environment, some of the features of the Nucleus server were of little value. She indicated "full-indexing" as an example. She said that capability certainly would be an advantage in environments where unstructured queries accounted for the bulk of the transaction volume.

PLATFORMS

· Donna felt that in order for any database package to be successful it should operate in distributed mode on all three platform levels (mainframe, mini, PC/workstation).

· Both Donna and the technical group felt that operability with UNIX platforms is a growing need, and Sybase rated the need for UNIX capability at a 4 on the 1 to 5 scale.

INPUT's RECOMMENDATION

INPUT does not believe that Sybase is a likely candidate as a longer term partner for Nucleus. If there is any potential it would probably have to be pursued at the presidential level. IN particular, Sybase seemed to indicate throughout the interview that hardware vendors would be the most likely candidates.

INTERVIEW SUMMARY - COMPAQ CORPORATION

STRATEGIC PARTNERS STUDY
Nucleus Corporation

CONTACTS - Primary

Mr. Richard Swingle PHONE: 713-374-4782
Director, Strategic Marketing
COMPAQ COMPUTER CORPORATION
9440 Louetta Road
Houston, TX 77070

CONTACTS - Other

Mr. Mike Swavely PHONE: 713-374-1365
Vice President - Marketing & Sales

SUMMARY

Based on Mr. Swingle's reaction, there is no interest on the part of Compaq in pursuing the Nucleus technology further. He explicitly indicated that they had made a strategic decision not to implement in "iron" anything but general purpose function. In addition they were not interested in any software. I doubt if approaching Compaq through some other route would make a significant difference.

DEMOGRAPHICS

- *FUTURE GROWTH* - The "price wars" on PC technology have cut margins at Compaq significantly. The traditional channels and distributors are not equipped to provide the sophisticated installation design and support required by either small corporations or departmental environments in larger firms. A lot of the growth opportunities will depend on maintaining Compaq's image of quality and allying with firms that can provide client/server solutions.

- *TARGET MARKETS/CHANNELS* - Increasing emphasis has been and will continue to be placed on corporate sales of workstations, servers and laptops. The marketing thrust will be toward "open systems". Direct corporate sales by Compaq (perhaps through solution seller alliances as mentioned above) will be a primary strategy.

- *DEVELOPMENT STRATEGY* - 90% of product design is conducted in-house.

OUTSIDE RELATIONSHIPS

- *STRATEGIC PARTNERSHIPS/ALLIANCES* - Significant alliances with the obvious hardware component and chip manufacturers. They currently own 26% of Conners, and have many other relationships. Many alliances in the marketing and sales areas with professional services and software companies. Primarily tactical in nature.

- *PARTNERSHIP/ALLIANCE CONTACTS* - At the marketing and strategy level Swavely should be considered a key contact. I believe there are several others, but could not get Swingle to tell me who they might be. An approach through the president's office might yield some results, but as indicated earlier, I don't think Compaq is a fertile field for Nucleus' objectives at the moment.

NUCLEUS TECHNOLOGY

- *SIGNIFICANCE/APPLICATION* - Dick indicated that they had seen "this type" of technology presented to Compaq on several occasions. Several of the ideas that he had seen come through seemed to have potential, but none have been consistent with Compaq's business strategy. (I'm not sure that he's the last word on this subject.)

NUCLEUS SERVER

- *RATING OF RDBMS CHARACTERISTICS* - (1 = Low Importance, 5 = Highest Importance)*

  - 3 Automatic full indexing of all elements*
  - 5 Ease of data base administration
  - 4 Database integrity, recovery characteristics
  - 3 Reduced disk storage
  - 2 Reduced memory requirements
  - 3 Object orientation
  - 4 Concurrency control
  - 4 Processing performance

  * *I really don't think that Swavely is technically qualified in this area.*

PLATFORMS

- Dick felt the best opportunities were in PC's/Workstations and mainframes. "They're the survivors!"

- He ranked the importance of UNIX for this implementation to be a 2 on a scale of 1 - 5 with 5 being the highest.

INPUTs RECOMMENDATIONS

INPUT does not believe that Compaq is a likely candidate for a long term strategic relationship. Based on the two discussions which INPUT had with Compaq, the primary thrust seems to be on assembling high-quality vanilla PCs and servers. If there are any next steps, they should be to try to identify who might be the chief "technologist" for Compaq and approach the company from that angle.

INTERVIEW SUMMARY - GO CORPORATION

STRATEGIC PARTNERS STUDY

Nucleus Corporation

CONTACTS - Primary

Mr. Satya Yenigalla
Data Base Architect
Go Corporation
950 Tower Lane
Foster City, CA 94404

PHONE: 358-3076

CONTACTS - Other

Mr. Bill Campbell
President

PHONE: 345-7400

SUMMARY

GO is extremely focused on getting its initial offering out the door at the moment. I believe that Mr. Yenigalla did read the product literature, and is clearly qualified to discuss the technology. However, he made it pretty clear, that now was not the time to entertain any indepth discussions of Nucleus' technology. He did however, request the detailed write-up which has been sent. I have given him Tom Bechler's number for potential additional inquiries.

DEMOGRAPHICS

- *STATISTICS* - GO would not disclose it's current financial status. This should be no surprise, and is probably not of general interest at the moment. They apparently have sufficient funding to get their initial offering off the starting block, and seem to have weathered the storm of moving from a hardware position to one of primarily systems software. (This shift changes the cash flow that investors see, and will stretch out the term of the investment pay-back.)

- *FUTURE GROWTH* - GO is betting on setting the standards in terms of pen-based operating system interfaces. It is extremely focused on this single target for the moment.

- *TARGET MARKETS/CHANNELS* - Although Mr. Yenigalla does not believe that their product will be limited to specific industries, he sees the initial application of their products in various field operations applications. Rental car, field service (various industries), customer service in general and logistics.

- *DEVELOPMENT STRATEGY* - 90% of software product content is being developed in-house. Significant alliances in hardware technology for current implementation. Utilize bidding procedures for commodity components. Unique technologies including pen and grid etc., through partnerships.

OUTSIDE RELATIONSHIPS

- *PARTNERSHIP/ALLIANCE CONTACTS* - Primarily through Campbell. Primary interests for outside expenditures are on new technologies which bear direct impact on the price performance of current product launch. Although Satya would not say explicitly, I believe that they have a significant partnership with a Japanese company for production of the pen and grid component.

NUCLEUS TECHNOLOGY

- *SIGNIFICANCE/APPLICATION* - Satya thought that technology was interesting, but felt that it had little or no direct bearing on their current objectives. I got the impression that there might be some interest down the road. It is interesting to note that he did not feel that the technology was "unique". Said that he had looked a bit vector processing based technologies before, but declined to name specific companies or reasons.

  Satya suggested that the highest area of interest might be among chip manufacturers, mini companies and software houses working in the database arena. (No surprise.)

NUCLEUS SERVER

- *RATING OF RDBMS CHARACTERISTICS* - (1 = Low Importance, 5 = Highest Importance)
  - 3 Automatic full indexing of all elements
  - 4 Ease of data base administration
  - 4 Database integrity, recovery characteristics
  - 2 Reduced disk storage
  - 2 Reduced memory requirements
  - 3 Object orientation
  - 2 Concurrency control
  - 4 Processing performance

- *OTHER COMMENTS* -

PLATFORMS

- Satya indicated that if the storage and channel transfer efficiencies claimed for the technology were solid, that the best opportunities for immediate application would be in the micro area. He also suggested that the Teradata people might be interested.

- He ranked the importance of UNIX for this implementation to be a 2 on a scale of 1 - 5 with 5 being the highest.

INPUTs RECOMMENDATIONS

INPUT believes that GO's present focus on product launch does not make it a good contender as a strategic partner at the moment. However, there may well be applications of Nucleus technology which could provide unique leverage points to pen based computing in the long term. INPUT recommends that Nucleus follow-up with GO at Bill Campbell's level once they've completed their product launch.

INTERVIEW SUMMARY - ORACLE CORPORATION

STRATEGIC PARTNERS STUDY

Nucleus Corporation

CONTACTS - Primary

Mr. Mike Hartstein — PHONE: 506-6254
Manager, RDBMS Marketing — FAX: 506-7200
Oracle Corporation
500 Oracle Parkway
Redwood Shores, CA 94065

CONTACTS - Other

Mr. Ed Adams — PHONE: 506-3092
Vice President

SUMMARY

Oracle is not interested in pursuing a relationship at this time. However, the did express interest in the technology. They have in hand a copy of the detailed writeup; and it's INPUT's judgement that Mike Hartstein, the primary interviewee, had a good grasp of the concepts underlying the technology. Mike did suggest a potential contact in the PC group which INPUT can follow-up on pursuant to Nucleus' evaluation of appropriate next steps.

DEMOGRAPHICS

- *STATISTICS* - Oracle is somewhere between an $800M and $1B dollar company with revenues split primarily between its distributed RDBMS products, applications solutions and profession services. Approximately $300M of its revenues come from services.

- *FUTURE GROWTH* - Oracle must continue to evolve and refine the underlying engine, but primary focus at the moment will be continued expansion of applications solutions that run on the underlying engine, and the development of applications solutions and professional services capabilities to become a full solution seller.

- *TARGET MARKETS/CHANNELS* - Applications packages already exist for key cross-industry markets such as accounting/finance and human resources. Primary vertical market targets include manufacturing and banking & finance; but the intent long term is to cover all significant verticals with applications suites. 90% of their products and services are sold directly through their in-house sales force.

- *DEVELOPMENT STRATEGY* - 95% of product content is developed in-house.

OUTSIDE RELATIONSHIPS

- *STRATEGIC PARTNERSHIPS/ALLIANCES* - Very few in the technology area, other than normal types of relationships with vendors or primary platforms of interest. Some alliances in the marketing areas, particularly overseas; but tendency is to cover the entire waterfront with in-house capability.

- *PARTNERSHIP/ALLIANCE CONTACTS* - Handled primarily by product management depending on the division. There is no formal process for identifying strategic partnership or alliance opportunities. When an opportunity is identified, it will typically be networked throughout the organization until all the right parties are involved.

NUCLEUS TECHNOLOGY

- *SIGNIFICANCE/APPLICATION* - Dave indicated that he thought the potential for the technology was significant. However, he felt that in terms of entering the relational data base market at this point, the best opportunity would be as an "under the cover" component of someone's existing product line.

  Other areas where their might be application would be in specialized databases. He thought that the implications of being able to put the algorithmic portion of the product in silicon were significant, and should probably be attractive to mini and micro hardware companies, as well as chip manufacturers. He did not think that anyone at Oracle would be interested in pursuing a relationship at this point in time. He said that they were "architecturally" committed.

NUCLEUS SERVER

- *RATING OF RDBMS CHARACTERISTICS* - (1 = Low Importance, 5 = Highest Importance)

  - 4 Automatic full indexing of all elements*
  - 4 Ease of data base administration
  - 5 Database integrity, recovery characteristics
  - 3 Reduced disk storage
  - 3 Reduced memory requirements
  - 3 Object orientation
  - 4 Concurrency control
  - 4 Processing performance
  - 4 Other: Multi-platform implementation

  * *For a limited set of unstructured applications*

- *OTHER COMMENTS* - Mike felt that it was not clear that the underlying technology would provide significant efficiency advantages in large structured applications. In particular he mentioned applications where the extremely large numbers of "values" in the selection sets. He also pointed out that he would need to know a lot more about how the system would handle concurrency, etc. in a distributed environment.

PLATFORMS

- Mike felt that the best targets for this technology were likely to be the mini-class machines, along with micros.

- He ranked the importance of UNIX for this implementation to be a 2 on a scale of 1 - 5 with 5 being the highest. Quote: "Unix can wait!"

INPUT's RECOMMENDATIONS

INPUT does not believe that Oracle should be considered out of the running for a partnership in the longer term. Short term interest is limited not only by the current architectural commitment, but by ORACLE's current business situation. Mike has in hand the detailed write-up on the underlying technology and has been given Tom Bechler's number to call to get more information on the technology. Some follow-up within a month is probably appropriate.

Appendix C: **EDITED CONTACT LISTINGS**

RELATIONAL DATA BASE/SOFTWARE COMPANIES

ASK/Ingres	Martin Brown, VP-Research & Development	CA	969-4442
ASK/Ingres	Marilyn Bohls	CA	748-3625
ASK/Ingres	Peter West, VP Business Development	CA	969-4442
ASK/Ingres	Craig Stevens, Dir., Product Marketing	CA	748-3569
ASK/Ingres	Dave Kellog, Data Server Products	CA	748-2516
ASK/Ingres	Nancy Bennett, Assistant	CA	748-2707
Gupta	Clark Catelan, VP Product Development	CA	415-321-9500
Informix	Gilbert Wai, ExDir-Product Mkt.	CA	926-6522
LOTUS	Bruce Johnston, Dir. Corp. Bus. Dev.	MA	617-693-7701
LOTUS	David Reed, VP Corporate Research	MA	617-577-8500
LOTUS	David Weinberg	MA	617-693-1732
LOTUS	Edward Belove, VP Corporate Research	MA	617-494-1192
Microsoft	Mike Hallman, President	WA	206-882-8080
Microsoft	Bill Gates, Chairman/CEO	WA	206-882-8080
Microsoft	Gary Voth, Prod. Mgr. SQL Server	WA	206-936-3615
Microsoft	David Thatcher, Product Manager	WA	206-882-8080
Oracle	Ed Adams, Vice President	CA	506-3092
Oracle	Mike Hartstein	CA	506-6254
Oracle	Hal Carr, Director	CA	506-1206
Sybase	Dick Sheffer, VP Marketing	CA	596-3500
Sybase	Mark Hoffman, President/COO	CA	596-3500
Sybase	Donna Jeker, Dir. of Strategic Partners	CA	596-3500
XEROX	Dick Bailey, Mgr. Arch./Strategy	NY	716-423-6055
XEROX	Frank Cabron, Mgr. Technology	NY	716-423-4483
XEROX	Robert Ford	CA	213-333-2850
XEROX	Dennis Frahman	CA	213-333-3151
XEROX	Joe McGrath, VP Mkt Planning, Int. Sys.	CA	408-737-4329
XEROX	Dudley Braun	CA	408-737-4495
XEROX	Cynthia Mittelsteadt	CA	408-737-4169
XEROX	Dennis Andrews, Div. VP-Systems Soft.	CA	408-737-3000

CHIP MANUFACTURERS

Intel	Frank Gill, VP Marketing/Sales	OR	503-696-7197
Intel	Avram Miller, Business Development	CA	408-765-1558
Intel	Robert Steinjan	CA	408-765-4925
Intel	Justin Rattner, Dir. of Technology	CA	503-629-7603
Intel	Wendy Vittori, Dir. Mkt./Strat. Plng.	CA	503-629-7678
MIPS	Stuart Gannes, Dir.-Strategic Planning	CA	408-524-7163
MIPS	Joe DeNucci, VP Strategy Development	CA	408-524-7013
MIPS	Steve Thomas, Dir. Market Development	CA	408-524-7237
Motorola	Blossom		

PC/WORKSTATION

Apple	Rick Davis, Software Product Mgr.	CA	408-974-4174
Apple	Randy Livingston, Mgr. Corp. Dev.	CA	408-974-5349
AST	Craig Tupper, Sr. Mgr. Reseller Admin.	TX	714-727-8220
AST	Safi Qureshey, CEO	TX	714-727-4141
AST	Genelle Trader, Dir., Portable Systems	TX	714-727-7905

Claris	Dan Eilers, President	CA	408-987-7485
Claris	Jim Davis	CA	408-987-7274
Compaq	Mike Swavely, VP-Marketing/Sales	TX	713-374-1365
Compaq	Richard Swingle	TX	713-374-4782
GO Corp.	Bill Campbell	CA	415-345-7400
Go Corp.	Satya Yenigalla, Data Base Architect	CA	415-358-3076

SYSTEMS PROVIDERS

DEC	George Starr, Consultant/Analyst Rel.	MA	508-496-5616
DEC	Nick Houpis	MA	508-467-5616
DEC	Dave Zwicker	MA	508-952-4118
DEC	Henry Crouse, VP-External Resources	MA	508-493-1555
DEC	Paul McEnroe	CA	691-4444
DEC	Richard Yen	CA	882-8607
HP	Jan McDaniels	CA	691-5197
HP	David Wertheim, Product Manager	CA	916-785-4645
HP	Rebecca Lee, Market Research	CA	691-5471
IBM	Bob Berland, VP Soft. Vend. Services	NY	914-288-2360
IBM	Cathy Grosholz	NY	203-783-7890
PACBELL	Maurice Welsh, VP Marketing	CA	823-6107
Stratus	Brian Cairns, President	MA	508-460-2000
Stratus	Kathy St. Hiliare, Sec. VP/Prod. Dev.	MA	508-460-2161
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Tandem	Gen Fukunaga	CA	408-285-7410
Tandem	Steve Schmidt, SVP	CA	408-285-5008
Tandem	Bruce Bastl	CA	408-285-6080
Tandem	Rich Gluck, Engineering Mgr.	CA	408-285-2639
Tandem	Gerry Held, VP-New Ventures	CA	408-285-4519

Appendix D: **STUDY SPECIFICATION**

INPUT

Research Proposal

STRATEGIC PARTNERS STUDY

For: Nucleus International Corporation

BACKGROUND AND OBJECTIVES

A. Background

Nucleus International possesses a unique proprietary technology which offers breakthrough performance levels in fundamental information processing procedures. This technology which has been patented provides a mathematically rigorous architecture which yields consistency in all types of database applications. Nucleus was founded as a limited partnership in 1983 and converted into a private corporation in 1987. The first product based on the proprietary technology is an SQL relational database management system which, according to benchmark tests, offers significant performance and memory management advantages over more conventional technologies, such as Oracle's.

At this stage in its development, Nucleus is interested in seeking potential business partnerships which can bring the basic technology to market for both their own and the potential partner(s) business advantage. To assist in that process, Nucleus is seeking an outside research and consulting firm familiar with the marketplace and key vendors to study potential channels and specific partnering opportunities. The specific objectives of such a study would be to:

B. Objectives

- Work jointly with Nucleus to identify the highest potential channels to effect the profitable technology transfer.

- Explore, on an unbiased and *confidential* basis, the interest in a partnership with a limited set specific potential partners operating in each channel.

- Provide unbiased recommendations on which channels and classes of partners are likely to have the highest probability of meeting Nucleus' business objectives.

SCOPE

Although INPUT has the capability to support Nucleus in this effort on a worldwide basis, it recommends that the scope of this study be limited to North American (U.S. and Canadian) markets and channels to minimize the costs associated with the study. For similar reasons, INPUT proposes that IBM be excluded from the consideration as a potential partner for this study. (Assuming a successful conclusion to the proposed study, INPUT would be pleased to develop an expanded approach which would eliminate these exclusions.)

METHODOLOGY

INPUT proposes an incremental approach to the study. The *Core Phase* would focus on obtaining a statement of Nucleus' objectives, and determining the highest yield channels of opportunity utilizing the collective intelligence of Nucleus and INPUT. In this phase of the study INPUT would interview three to four targeted firms in each of the two channels offering the best possibilities. The methodology would be as follows:

- **Project Kick-Off** - INPUT will conduct a meeting (1 day, Culver City) with the appropriate Nucleus staff to:

  - Establish a statement of Nucleus' business objectives for a partnership;
  - Further educate INPUT on the product and Nucleus' view of its potential application areas;
  - Determine Nucleus' views on the ideal channels given experience to date;
  - Refine the methodology and approach.

- **Finalization of Scope** - After the meeting with Nucleus, INPUT's project manager will review the project objectives, product characteristics and suggested channels with a selected group of INPUT's key consultants to obtain their views. INPUT's project manager will then provide Nucleus with its final recommendations for the channels, approach and firms to be interviewed.

- **Interview Design** - INPUT will design an interview guide for gathering the required information from potential partners, and conduct two sets of channel interviews.

- **Interviews** - Three to four companies should be interviewed for each channel of interest. It probably will be necessary to conduct more than one interview per firm. Interviews will be conducted by INPUT senior staff. (Depending on the companies to be interviewed, different members of INPUT's senior staff may be utilized in order to leverage their existing relationship with individual firms being interviewed.) Although INPUT anticipates that most of this information can be collected through a telephone interviewing process, it may be necessary to conduct some interviews face-to-face.

- **Channel Analysis** - INPUT will prepare a brief written analysis of the findings for each channel.

- **Final Recommendations** - Once the interviews have been completed for the selected channels, INPUT will prepare a written set of recommendations (5 - 7 pages) presenting its thoughts on the best alternatives and potential next steps.

To successfully accomplish the project, INPUT expects that Nucleus will provide an overall project coordinator. Although INPUT does not anticipate making heavy time demands on the coordinator, such an individual will be of great assistance to insure that all intelligence available to Nucleus is incorporated into the study, and to provide project continuity.

DELIVERABLES

- A written statement of the project objectives and methodology.
- A formal interview guide.
- A written analysis of the results of the investigation of a minimum of two channels for the *Core Project*. (If Nucleus authorizes additional channels for analysis in at the initiation of the study, they will be included in the analysis.)
- On-site presentation of the results in Culver City.

FEES AND SCHEDULES

A. Fees

INPUT's professional fees for the *Core Project* are $11,000, plus travel expenses (billed at cost to INPUT). Assuming that four firms will be interviewed for each incremental channel analysis, the price per incremental channel would $3,000 including the written analysis.

B. Schedules

Final schedules will be negotiated subsequent to a full discussion of the proposal. However, INPUT believes that the *Core Project* can be completed within four weeks of initiation.

Schedules for the addition of channels will be established jointly with Nucleus.

QUALIFICATIONS/STAFFING

A. Qualifications

INPUT is a well-positioned to assist Nucleus in meeting these objectives through custom field research. As an international research and consulting firm INPUT offers a variety of ongoing research programs to vendors and users of information systems technology and services in North America, Europe, the U.K. and Japan. INPUT's resources include a comprehensive data base of its own proprietary research and a team of experienced interviewers and analysts who conduct frequent, comprehensive, and confidential interviews to gain insights into industry, competitive and market trends. Among the professional staff are individuals with extensive experience in understanding technology markets, delivery channels, vendor strategies and industry contacts in areas of specific business interest to Nucleus. INPUT has already conducted similar studies for a number of other firms.

B. Staffing

This project will be under the overall direction of R. Dennis (Denny) Wayson and will utilize senior staff from the Mountain View and New Jersey offices.

Mr. Wayson's profile follows:

R. Dennis Wayson is a Vice President of INPUT. He has well over 20 years of experience in many areas of the information services industry. At INPUT he has been responsible for all U.S. based research staff, including user and vendor programs, custom research, and corporate planning. As a senior manager he is a key player in all INPUT plans and activities. He has held positions with Bank of America in the management of user-based systems (worldwide), and he was Director of Information Systems and Technology at Sun Company for many years. He is also a popular speaker at industry conferences and consultant to top companies around the world. He holds a B.S. degree from Lehigh University and an M.S. in Operations Research and Computer Science from Cornell University. He also has attended the Columbia University program in business management.

DURATION OF THIS PROPOSAL'S VALIDITY

The terms of this proposal will remain valid for 15 days unless extended in writing.

AUTHORIZATION

Authorization of this project may be completed by signing and returning a copy of the proposal to INPUT, together with 1/2 the project fee ($5,500). The remainder would be due upon delivery of the *Core Project* presentation. Upon acceptance by INPUT, a countersigned copy of the proposal will be returned to Nucleus and project work will commence subsequent to the establishment of a mutually agreed upon schedule.

AUTHORIZED BY:	ACCEPTED BY:
Nucleus	INPUT
_____	_____
Signature	Signature
_____	_____
Name	Name
_____	_____
Title	Title
_____	_____
Date	Date